7068 Waterfowl

GLEN C. SANDERSON

JOB COMPLETION REPORT

INVESTIGATIONS PROJECTS

As Required by

FEDERAL AID IN WILDLIFE RESTORATION ACT

WATERFOWL PRODUCTION SURVEYS

1955 SEASON

Pittman-Robertson Project W-15-R

Job No. 8-54

Nebraska Game, Forestation & Parks Commission

L. P. Vance
Supervisor of Game

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Report for the period

July 1, 1955 to August 1, 1955

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JOB COMPLETION REPORT

INVESTIGATIONS PROJECTS

State of Nebraska

Project No. W-15-R Job No. 8-54

Title of Job: Waterfowl Production Surveys

Objectives: The determination of the reproductive success of the waterfowl breeding population to provide an estimate of the number of ducks that will enter the flyway population from Nebraska.

Procedure: Roadside counts were made over routes established in 1948 in Rock, Holt, Grant, Sheridan, and Box Butte Counties. All broods observed within one-eighth mile either side of the road were recorded by species, age, and number of young. The counts were made during mid-July by the writer.

Findings: Weather conditions were generally favorable to waterfowl production as the warm weather which arrived early in June moderated and seasonable temperatures prevailed until after the broods had matured. However, drought conditions continued to prevail over much of the sandhill area. Approximately one-half of the water areas available to breeding ducks in the eastern sandhills had dried up by the breeding season. The dry-up, though significant, was much less severe in the western sandhills.

Table 1 presents a summary of the data obtained on the 1955 brood count. As breeding pair counts were not made over these routes in 1955, no brood-per-pair computations can be made; however, general observations indicate excellent nesting success as evidenced by a lack of loafing females in most species during the mid-July counts.

Table I. Mid-July Sandhill Brood Counts

	western* routes	eastern** route	over-all
broods observed	53	6	59
total ducklings	354	43	397
ducklings/brood			6.7
square mile sampled	33.8	8.3	42.1
broods/square mile			
1955	1.6	0.7	1.4
1954	1.5	0.9	1.4
change, 1954 to 1955	+ 7%	- 22%	none
average broods/sq. mile 1948 to 1954	2.1	2.9	2.2
change, average to 1955	- 29%	- 69%	- 37%

*Located in Grant, Sheridan, and Box Butte Counties.
**Located in Rock and Holt Counties.

JOB COMPLETION REPORT

INVESTIGATIONS PROJECTS

State of Nebraska

Project No. W-15-R Job No. 8-5A

Title of Job: Waterfowl Production Surveys

Objectives: The determination of the reproductive success of the waterfowl breeding population to provide an estimate of the number of ducks that will enter the flyway population from Nebraska.

Procedure: Roadside counts were made over routes established in 1952 in Rock, Holt, Grant, Sheridan, and Box Butte Counties. All broods observed within one-eighth mile either side of the road were recorded by species, age, and number of young. The counts were made during mid-July by the writer.

Findings: Weather conditions were generally favorable to waterfowl production as the warm weather which arrived early in June moderated and reasonable temperatures prevailed until after the broods had matured. However, drought conditions continued to prevail over much of the sandhill area. Approximately one-half of the water areas available to breeding ducks in the eastern sandhills had dried up by the breeding season. The dry-up, though significant, was much less severe in the western sandhills.

Table 1 presents a summary of the data obtained on the 1955 brood count. As breeding pair counts were not made over these routes in 1955, no brood-per-pair computations can be made; however, general observations indicate excellent nesting success as evidenced by a lack of loafing females in most broods during the mid-July counts.

Table 1. Mid-July Sandhill Brood Counts

	western* routes	eastern** route	over-all
broods observed	53	6	59
total ducklings	351	43	394
ducklings/brood			6.7
square mile sampled	73.3	8.5	81.8
broods/square mile			
1955	1.6	0.7	1.4
1954	1.5	0.9	1.4
change, 1954 to 1955	+ 7%	- 22%	none
average broods/sq. mile			
1948 to 1954	2.1	2.9	2.2
change, average to 1955	- 29%	- 69%	- 27%

*Located in Grant, Sheridan, and Box Butte Counties.
**Located in Rock and Holt Counties.

The first broods of mallards and pintails were observed on June 1, nearly two weeks earlier than the average date for the four prior years. The apparent hatching peak for the other species was near normal and no significant re-nesting was noted in any species.

Conclusions: The 1955 breeding population decreased about 45 percent from that of 1954. Excellent nesting success for most species probably offset some of this loss; however, it may be concluded that at least a one-third decrease occurred in the fall flight from Nebraska.

Summary:

1. Fifty-nine broods were observed on the waterfowl routes during a mid-July, 1955, count.

2. The brood size averaged 6.7 young for all age classes.

3. The 1955 brood index (broods per square mile) was 1.4 which was 37 percent below the 1948-54 average.

4. The hatching peak appeared near normal except for mallards and pintails which appeared about two weeks early.

5. Little evidence of nest destruction or re-nesting was noted.

Recommendations: It is recommended that waterfowl brood counts be continued to provide estimates of the number of ducks expected to enter the fall flight from Nebraska. It is recommended that increased study be given to brood per breeding pair relationships especially as intensive studies of small, isolated lake areas as a means of increasing the accuracy of flight estimates.

Prepared by Harvey W. Miller
District Game Manager

Approved by Phil Agee
Project Leader

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